

**Fw: Aquifer Exemption History****Stacey Dwyer** to: Philip Dellinger, Jose Torres, Ray Leissner, Lisa Pham

09/12/2012 09:25 AM

From: Stacey Dwyer/R6/USEPA/US  
To: Philip Dellinger/R6/USEPA/US@EPA, Jose Torres/R6/USEPA/US@EPA, Ray Leissner/R6/USEPA/US@EPA, Lisa Pham/R6/USEPA/US@EPA

History: This message has been forwarded.

Please review and let's discuss later in the week.

Stacey

----- Forwarded by Stacey Dwyer/R6/USEPA/US on 09/12/2012 09:24 AM -----

From: Harry Anthony <hanthony@uraniumenergy.com>  
To: Sam Coleman/R6/USEPA/US@EPA, William Honker/R6/USEPA/US@EPA, Stacey Dwyer/R6/USEPA/US@EPA  
Cc: Craig Holmes <pommelhouse@sbcglobal.net>, Ben Klein <klein@heatherpodesta.com>  
Date: 09/11/2012 02:44 PM  
Subject: Aquifer Exemption History

Dear Sam/Bill/Stacey,

At Friday's meeting a comment regarding the special situation surrounding Goliad was made that I wanted to clear up as I had heard it mentioned previously. Insofar as geologic and hydrologic conditions are concerned, the Goliad Project is no different than all the others previous approved projects that have been concurred by EPA. There are numerous examples in Texas where drinking water wells far out number the current inventory at Goliad. However, I have attached two pdf files for your review that documents some of the history of past Aquifer Exemptions and have provided additional support language from applications that clearly demonstrates that the Goliad project is NOT unusual in its water well inventory setting. Maybe what's unique, is the low number of wells inside the quarter mile buffer zone at Goliad...

In any future contested case, here is proof that the Goliad Project is not unique.

The attachments were compiled by Craig Holmes who, as you know, has been professionally involved with the uranium industry dating back 30 years and who possesses an extensive library of mining applications, not to mention personal involvement, from whence to source the history of the uranium industry in Texas.

Finally at the meeting on Friday I was left with the understanding that EPA would contact Goliad County Groundwater Conservation District, and possibly the Church elders, this week to discuss moving forward with option 2b. We would like to be kept current on the discussions as to the extent you are able to provide.

If you have questions, please do not hesitate to contact me...

Best regards,  
Harry

**Harry L. Anthony, IV PE | Chief Operating Officer - Director**

**Uranium Energy Corp.**

**Direct:** 361-888-8235 ext 224

**Fax:** 361-888-5041

**Cell:** 361-522-8880



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Aquifer Exemption History Summary.pdf



AE History.pdf

00638.pdf

## Aquifer Exemption History Summary and Court Case Findings

Throughout the 30 plus years of ISR uranium mining in Texas, EPA Region 6 has consistently concurred with the State of Texas in issuing aquifer exemptions (AEs) based on the clear language provided in the rule at 40 CFR § 146.4, Criteria for exempted aquifers. The rule plainly states : “An aquifer or portion thereof which meets the criteria for an “underground source of drinking water” in § 146.3 may be determined under § 144.7 of this chapter to be an “exempted aquifer” for Class 1-V wells if it meets the criteria in paragraphs (a) through (c) of this section. Class VI wells must meet the criteria under paragraph (d) of this section.”

- (a) It does not currently serve as a source of drinking water; and
- (b) It cannot now and will not in the future serve as a sources of drinking water because:
  - (1) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.

All AE applications have demonstrated that there were no drinking water wells that currently used the proposed aquifer exemption area by conducting a survey of water wells to demonstrate that no drinking water wells existed within the proposed AE Boundary. In a few cases where water wells existed within the AE Boundary, the wells were plugged and an alternate drinking water source was provided outside of the AE Boundary. Please note the underlined words above: “currently used”. These specific words can be found in EPA’s past Approvals to TCEQ’s predecessors (see **Attachment 1, EPA Aquifer Exemption Approval Letters**). A review of **Attachment 1** further shows that the words currently used are synonymous or interchangeable with the words currently serve (see the more recent EPA approval letters).

These numerous demonstrations were based on wells documented in the public record as well as on-the-ground surveys that were completed within and around the proposed AE boundaries. Detailed maps and tables clearly identified all wells. With regard to the presence of drinking water wells, the standard of proof was that no drinking water well was physically located within the lateral bounds of the proposed aquifer exemption boundary. In some limited instances, as noted above, existing water wells within the proposed AE Boundary were plugged and an alternative source of drinking water was supplied to the landowner by the uranium mining company. These water well inventories served as the basis for the AEs issued by Region 6 as non-substantial revisions to the UIC program.

The applications also contained adequate geological information within the permit applications that demonstrated that the proposed AE area contained commercial quantities of uranium. This demonstration was accepted by Region 6 throughout the history of the industry in Texas. The commercial amounts of uranium present satisfied the second prong of the rule: “it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible” (see Region 6 Approval Letters in Attachment 1).

The purpose of this AE summary is fourfold: (1) to demonstrate to Region 6 that the notion that previous AEs were only issued for uranium operations that were very remote from existing area water wells is inconsistent with the historical record, and that the Goliad site is unique in that it is not like the settings where other AEs were issued; (2) to show that EPA Region 6 has consistently issued AEs via concurrence with the TCEQ and its predecessor agencies based on the plain language provided in 40 CFR 146.4; (3) to show that the litmus test that was used to demonstrate that the proposed aquifer exemption areas were not currently being used for drinking water was to present a water well inventory showing that drinking water wells were not, or would not, be located within the AE Boundary.

If the inventory showed that no drinking water wells were located within the lateral bounds of the proposed AE area, then it was determined that the aquifer is not currently serving as a drinking water source; and (4) to provide excerpts from two court cases that clearly ruled that the test for whether an aquifer is currently serving as a source of drinking water is based on whether or not drinking water wells are actually located within the lateral bounds of the proposed AE area.

### **Historic AE Area Settings**

As Region 6 noted in their May 2012 letter to TCEQ, the region has approved over 30 AEs when it can be demonstrated that applicant meets regulatory criteria (see footnote 2 in the Region 6 letter). Of course Region 6 issued over 30 AEs based on the appropriate regulatory criteria, they would not have legally done otherwise. And the regulatory criteria that Region 6 acted on over the past 30 years are noted above in the opening paragraph. The following summary is provided to show concrete examples that Region 6 has approved AEs for uranium projects that in fact had nearby drinking water wells. Some of the settings described below were not at all unlike the setting at Goliad. Please refer to **Attachment 2 Water Well Inventories** when reading the summaries below.

#### U.S. Steel's Moser Mining Project

The first Attachment shows a map of the project permit boundaries and their respective names (Boots, Clay West Shallow, Burns, etc.). Also shown on the map are a large number of water wells. Each well has a number which is cross-indexed to Table 7A – Area Water Wells. A look at the table shows there are 99 water wells in and around the uranium mine areas. Obviously, this is not a remote setting without water wells.

#### Mobil Oil Corporation, Energy Minerals Project

This Attachment includes a cover letter from Mobil Oil Corporation to the Texas Department of Water Resources (TDWR) as part of the company's permit application for its ISR uranium mine and a table titled Attachment 7 – Water Supply Wells. As can be seen from the table, there are 30 area wells. Of the 30 listed wells, 16 are for human consumption.

#### Tenneco Uranium, Inc. West Cole Project

The third Attachment includes information taken from an Environmental Assessment written by the Texas Department of Health (TDH), Radiation Control Branch in 1981. At that time, TDH had the

regulatory authority to review and issue Radioactive Material Licenses for ISR uranium operations. Figure 1 in this Attachment is a regional map showing 9 separate uranium mining operations near the towns of Hebbronville and Bruni, Texas. Admittedly, the setting in and around Bruni and Hebbronville is not a bustling metropolitan area, neither is it in the middle of nowhere. The towns have a number of businesses, hotels, restaurants, schools, landowners with water wells, etc. A page (see page 8 in the Attachment) copied from the company's mine application states that there are 28 water supply wells within 3.2 km of the West Cole Project. **Please note that the West Cole project is one of 9 uranium projects between Bruni and Hebbronville.** To get an idea of how many water supply wells there actually were when these mines were being permitted and issued AEs, one would have to compile all of the water well surveys that were done for each project. The fourth Attachment in this document provides a little more insight into what the water supply well situation was when Total Minerals Corporation filed for a major amendment to its RML in May 1989.

#### Total Minerals Corporation's West Cole Project

This attachment begins with a copy of the transmittal letter from Total Minerals Corporation to the TDH regarding its West Cole uranium project. The attachment also contains page 6 from Chapter 8 of the Amendment Application. As can be seen from this page, it was reported that a water well inventory was conducted and a total of **36 water wells were identified within 1 km of the permit boundary.** Of these 36 water wells, **24 were drinking water wells** (see enclosed Table 8.2 in Attachment 4). Again, this setting could not be accurately described as a remote area without nearby drinking water wells.

#### Wyoming Mineral Corporation's Lamprecht Project

Compared to some ISR sites, this project had fewer existing water supply wells. As shown in the information (see map titled Location of Water Wells at the Lamprecht Facility and Vicinity), the site had just a few wells.

#### Texaco Inc.- Sunoco Energy Development Company – Hobson TEX-1 Project

This project was developed in 1984. The information provided herein shows that the site is described as being generally reflective of the county (Karnes County). The land use included cattle grazing, agricultural crops, oil and gas production and light residential. It is interesting to note that page 26, which was copied from TDH's Environmental Assessment (EA), states that there are three residences within the license area. As can be seen from page 66 of the EA, the applicant located 37 water wells within 2.5 miles of the license area. To get a better idea of where some of these wells were, a map from the EA is enclosed. The map shows that there were 12 wells within 1 km of the site and 4 of the wells were within ¼ mile. Yet again, this setting cannot be accurately described as remote with no nearby water wells.

Departing from the subject of water well inventories for a moment, it is interesting to note that on page 69 of the EA, TDH stated: "As expected, concentrations of radium-226 are notably higher than in regional wells." **The reason TDH expected radium-226 to be higher in the water wells within what was to become the AE area, is that there was a uranium ore body at the site.** Also, since every ISR mine

application documented that water quality within and near uranium ore body obviously has higher concentrations of radium-226, TDH was not surprised. **The water in these aquifers far exceed the drinking water standard of 5 pCi/l radium-226.**

#### Uranium Resources, Inc. Kingsville Dome In Situ Uranium Leach Project

The enclosed information shows that URI's Kingsville Project had 9 water supply wells within 1 km of the site. In addition, there were 10 major water supply wells within 5 miles of the site and the city of Kingsville is nearby. Tables 4 and 5 from URI's permit application show the well owners and the water use.

In summary, the information presented above objectively demonstrates that AEs have in fact been issued for areas that are not unlike the Goliad setting.

#### Interpretation of 40 CRF 146.4, Criteria for exempted aquifers

**Attachments 3 and 4** titled **Western Nebraska** and **UEC's Contested Case**, respectively provide the most cogent and succinct statements on the test for determining whether an aquifer or portion thereof is **currently** serving as a source for drinking water. The rulings of two judges are perfectly in line with how EPA and Texas have assessed and approved aquifer exemptions to date.

## **Attachment 1**

### **EPA Aquifer Exemption Approval Letters**

**Attachment 2**

**Water Well Inventories**

**Attachment 3**  
**Western Nebraska**



## **Attachment 4**

### **UEC's Contested Case**

### **Administrative Law Judge's**

### **Proposal for Decision**

**(Key Excerpts Regarding Test for Current Use)**



## Fw: Aquifer Exemption History

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In any future contested case, here is proof that the Goliad Project is not unique.

The attachments were compiled by Craig Holmes who, as you know, has been professionally involved with the uranium industry dating back 30 years and who possesses an extensive library of mining applications, not to mention personal involvement, from whence to source the history of the uranium industry in Texas.

Finally at the meeting on Friday I was left with the understanding that EPA would contact Goliad County Groundwater Conservation District, and possibly the Church elders, this week to discuss moving forward with option 2b. We would like to be kept current on the discussions as to the extent you are able to provide.

If you have questions, please do not hesitate to contact me...

Best regards,  
Harry

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**Direct:** 361-888-8235 ext 224

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Aquifer Exemption History Summary.pdf



AE History.pdf

## **Attachment 1**

### **EPA Aquifer Exemption Approval Letters**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1201 ELM STREET  
DALLAS, TEXAS 75270

FILE 2023.C

December 17, 1984

Mr. Charles Nemir  
Executive Director  
Texas Department of Water Resources  
P.O. Box 13087, Capitol Station  
Austin, TX 78711

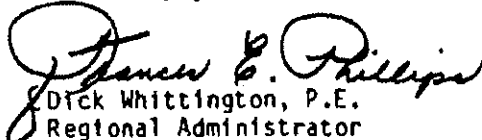
Dear Mr. Nemir:

I am pleased to inform you of EPA approval of your request to exempt a portion of the Lagarto formation from the Underground Injection Control (UIC) program requirement that no fluid may be injected into an Underground Source of Drinking Water (USDW). This approval is based upon the criteria stipulated in 40 CFR 144.7(b), 145.32, and 146.02 containing regulations allowing an aquifer to be exempted if: (a) it is not currently used as a drinking water supply, and (b) it cannot be used as a drinking water source in the future because it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible. This approval allows injection for in-situ uranium mining only. If injection for other purposes (e.g., hazardous waste disposal) is planned into this aquifer, additional EPA approval will be needed.

The approved exempted aquifer underlies the Everest Minerals Corporation, Mt. Lucas West site, and is limited to the Lagarto formation. A detailed description of the exempted aquifer remains as described in your February 15, 1984, request.

If you have any questions concerning this approval, please contact me or have your staff contact Bill Honker at (214) 767-2774. Thank you for your continued cooperation.

Sincerely yours,

  
Dick Whittington, P.E.  
Regional Administrator



file in URO2155-001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION VI  
INTERFIRST TWO BUILDING, 1201 ELM STREET  
DALLAS, TEXAS 75270

March 28, 1984

Mr. Charles E. Nemir  
Executive Director  
Texas Department of Water Resources  
P.O. Box 13087, Capitol Station  
Austin, TX 78711

Dear Mr. Nemir:

I am pleased to approve your December 6, 1983, request to exempt a portion of the Middle Catahoula formation from the Underground Injection Control program requirement that no fluids may be injected into an underground source of drinking water. This approval amends the existing exemption at the Mobil Oil Corporation - El Mesquite in-situ uranium mine. The exempted aquifer now includes the Middle Catahoula formation, or Soledad Conglomerate, between the elevations of 400 feet below mean sea level to 350 feet above mean sea level. The lateral limits of the exempted aquifer are limited to Mobil Oil Corporation's El Mesquite Project Permit area, as delineated on maps submitted with your December 6 letter. The exemption is to allow injection for in-situ uranium mining only. Additional EPA approval would be required if injection for other purposes (e.g. hazardous waste disposal) would be proposed.

We evaluated your request according to criteria set out in 40 CFR 144.7(b), 145.32, and 146.04. Those regulations allow an aquifer to be exempted if: (a) it is not currently used as a drinking water source and (b) it cannot be used as a drinking water source in the future because it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible.

Thank you for your continued cooperation in the area of Underground Injection Control. If you need to discuss any aspect of this approval, please contact me.

Sincerely yours,

Dick Whittington, P.E.  
Regional Administrator



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI  
ALLIED BANK TOWER AT FOUNTAIN PLACE  
1445 ROSS AVENUE  
DALLAS, TEXAS 75202

May 15, 1987

Mr. Larry R. Soward  
Executive Director  
Texas Water Commission  
P.O. Box 13087, Capitol Station  
Austin, TX 78711

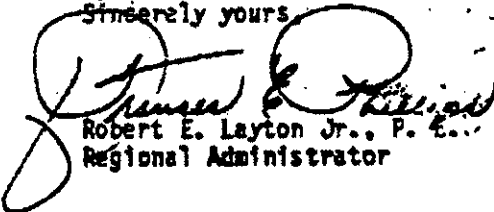
Dear Mr. Soward:

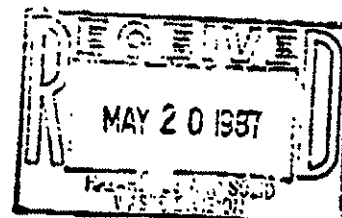
I am pleased to inform you of EPA approval of your request to exempt a portion of the Goliad Formation from the Underground Injection Control (UIC) program requirement that no fluid may be injected into an Underground Source of Drinking Water (USDW). This approval is based upon the criteria stipulated in 40 CFR 144.7(b), 145.32, and 146.02 containing regulations allowing an aquifer to be exempted if: (a) it is not currently used as a drinking water supply, and (b) it cannot be used as a drinking water source in the future because it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible. This approval allows injection for in-situ uranium mining only. If injection for other purposes (e.g., hazardous waste disposal) is planned into this aquifer, additional approval will be needed.

The approved exempted aquifer underlies the Uranium Resources, Incorporated, Kingsville Dome Mines Site, and is limited to the Upper Goliad Formation. A detailed description of the exempted aquifer remains as described in your April 15, 1986 and February 11, 1987, submittals.

If you have any questions concerning this approval, please contact me or have your staff contact John H. Walker at (214) 656-7160. Thank you for your continued cooperation.

Sincerely yours,

  
Robert E. Layton Jr., P. E.  
Regional Administrator





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

ALLIED BANK TOWER AT FOUNTAIN PLACE

1445 ROSS AVENUE

DALLAS, TEXAS 75202

REPLY TO: 6W-SU

November 17, 1987

Mr. Larry R. Soward  
Executive Director  
Texas Water Commission  
P.O. Box 13097, Capitol Station  
Austin, Texas 78711

RE: Aquifer Exemption Request, Uranium Resource, Inc., Rosita Site.  
Permit No. UR02980-001, Duval County

Dear Mr. Soward:

I am pleased to inform you of the Environmental Protection Agency draft approval of your request to exempt a portion of the Goliad Formation from the Underground Injection Control program requirements that no fluid may be injected into an Underground Source of Drinking Water. This draft approval is based upon the criteria stipulated in 40 CFR 144.7(b), 145.32, and 146.4 containing regulations allowing an aquifer to be exempted if: (a) it is not currently used as a drinking water supply, and (b) it cannot be used as a drinking water source in the future because it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible. We request that Uranium Resources, Incorporated, send us confirmation that the public notice has been announced. Upon the completion of the public notice period, a final determination will be made regarding the exemption. This exemption will allow injection for in-situ uranium mining only.

The draft approved exempted portion of the aquifer underlies the Uranium Resources, Incorporated, Rosita Mine Site, in Duval County and is limited to the Lower Goliad Formation. A detailed description of the exempted portion of the aquifer remains in the exemption request and subsequent comment letters.

If you have any questions concerning this approval, please contact me or have your staff contact Stephanie Johnson at (214) 655-7160. Thank you for your continued cooperation.

Sincerely yours,

Myron O. Knudson, P.E.  
Director  
Water Management Division (6W)

cc: Charles J. Greene, TWC  
Dale Kohler, TWC ✓



66-02463-031  
Carroll

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TEXAS 75202

January 24, 1989

REPLY TO: 6W-SU

Mr. Allen P. Beinke, Jr.  
Executive Director  
Texas Water Commission  
P.O. Box 13097, Capitol Station  
Austin, Texas 78711

Re: Aquifer Exemption Amendment Request, Total Minerals Corporation  
West Cole Mining Project, Permit No. UR02463-031, Webb County

Dear Mr. Beinke:

I am pleased to inform you of the Environmental Protection Agency approval of your request to exempt an additional portion of the Catahoula Tuff formation from the Underground Injection Control program requirements that no fluid may be injected into an Underground Source of Drinking Water. This approval is based upon the criteria stipulated in 40 CFR 144.7(b), 145.32, and 146.4 containing regulations allowing an aquifer to be exempted if: (a) it is not currently used as a drinking water supply, and (b) it cannot be used as a drinking water source in the future because it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible. This exemption approval will allow injection for in-situ uranium mining only. If injection for other purposes (e.g. hazardous waste disposal) is planned into this aquifer, additional approval will be needed.

The approved exempted portion of the aquifer underlies the Total Minerals Corporation West Cole Mining Site, in Webb County and is limited to the Catahoula Tuff formation. A detailed description of the exempted portion of the aquifer remains in the exemption request and subsequent comment letters.

If you have any questions concerning this approval, please contact me or have your staff contact Phil Dellinger at (214) 655-7160. Thank you for your continued cooperation.

Sincerely yours,

*Myron O. Knudson*  
Myron O. Knudson, P.E.  
Director  
Water Management Division (6W)

FEB 07 89

cc: Charles J. Greene, TWC  
Dale Kohler, TWC



# TEXAS WATER COMMISSION



## AN ORDER Designating an Exempted Aquifer for Total Minerals Corporation, West Cole Mining Project, Permit No. UR02463

On the 22nd day of June, 1989, the Texas Water Commission, after proper notice, considered the request of Total Minerals Corporation for an Order amending its exempted aquifer designation for its West Cole Mining Project, authorized by Permit No. UR02463, and located along FM 2050, approximately 1.5 miles north of Bruni, Texas, in Webb County.

After considering the evidence and arguments presented, the Texas Water Commission makes the following Findings of Fact and Conclusions of Law:

### FINDINGS OF FACT

1. There is no current Texas Water Commission Order designating an exempted aquifer for the West Cole Mining Project because the aquifer exemption for the permit area of the Project was approved by the Federal Environmental Protection Agency in 1982 when the predecessor to the Texas Water Commission received primacy to administer a State underground injection control program.
2. The existing aquifer exemption covers 680 acres at a depth interval from 610 to 335 feet above mean sea level.
3. Total Minerals Corporation has filed an application to amend the aquifer exemption to add to the existing exemption area, two areas of 2.37 acres, as described in Exhibit 3, and 16.94 acres, as described in Exhibit 2, which are within the permit area.
4. Groundwater in the aquifer, the subject of the application, meets the criteria for fresh water.
5. The aquifer does not currently serve as source of drinking water for human consumption.
6. Until the exempt status is removed, the aquifer will not in the future serve as a source of drinking water for human consumption because it is mineral-bearing, with production capability.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

MAY 17 2002

RECEIVED  
MAY 21 2 43  
WASTE PERMITS DIVISION

*Katherine Nelson*  
Mr. Jeff Saitas  
Executive Director  
Texas Natural Resource  
Conservation Commission (TNRCC)  
P. O. Box 13087  
Austin, Texas 78711-3087

4203060

Dear Mr. Saitas:

I am pleased to inform you Region 6 finds TNRCC's application to exempt the Goliad B and C sands at the Alta Mesa uranium mining project in Brooks County, Texas, a non-substantial revision to its underground injection control program. As such, by authority delegated to our Regional Administrator and redelegated to the Water Quality Protection Division, we approve the exemption under the criteria provided in Title 40 of the Code of Federal Regulations §146.4. Specifically, we find the sands meet the criteria for exemption at:

- §146.4 (a): It does not currently serve as a source of drinking water; and
- §146.4 (b): It cannot now and will not in the future serve as a source of drinking water because: (1) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.

The areal extent and lateral and horizontal boundaries of the exempted portions of the two sands are as described in TNRCC's March 8, 2001 response (enclosed) to Region 6's second notice of deficiency and as depicted in Attachment 1 to the Aquifer Exemption Boundary, Area of Review plat map. This exemption applies only to well injection for purposes of uranium mining and restoration as proposed in Mestena's permit application and permit provided by TNRCC in its Underground Injection Control program revision application. Injection into the exempted sands for other purposes requires additional approval.

RECEIVED  
TNRCC IHW PERMITS

MAY 25 2002

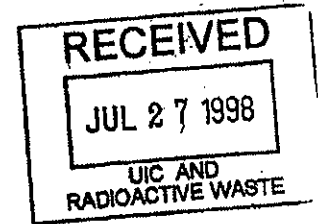
WASTE PERMITS DIVISION

DOC# 6825-1  
WVCH# \_\_\_\_\_  
TEAM \_\_\_\_\_  
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COORDINATOR \_\_\_\_\_  
DUE DATE \_\_\_\_\_



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

JUL 17 1998



Mr. Jeff Saitas  
Executive Director  
Texas Natural Resource Conservation Commission  
P. O. Box 13087  
Austin, Texas 78711-3087

WRO2880

Dear Mr. Saitas:

I am pleased to inform you EPA Region 6 has approved the Texas Natural Resource Conservation Commission's (TNRCC) revision request to exempt portions of two aquifers for the purposes of uranium mining. These exemptions are specific to:

- 1) that portion of the Oakville Sandstone Formation, underlying approximately 842 acres, at a depth of 150 to 210 feet subsurface, ten miles south-southeast of the City of Bruni in Duval County, Texas (a. k. a. the Vasquez Project); and
- 2) that portion of the Goliad Formation, underlying approximately 70 acres, at a depth of 140 to 260 feet subsurface, 11 miles northwest of the City of San Diego in Duval County, Texas (a. k. a. the Rosita Project).

The areal extent of the Vasquez and Rosita projects' exemptions are specifically defined in the Uranium Resources Incorporated (URI) applications as initially conveyed by TNRCC to Region 6 on September 17, 1997, and February 4, 1998, respectively. The Rosita Project is an extension to an exemption approved by Region 6 in October, 1988. Region 6 has approved these exemptions as non-substantial revisions to the TNRCC's Underground Injection Control program.

These approvals are based upon the criteria stipulated in Title 40 of the Code of Federal Regulations §146.4; wherein a portion of an aquifer may be exempted if: (a) that portion does not currently serve as a source of drinking water; and (b) it cannot now and will not, in the future, serve as a source of drinking water, because the aquifer is mineral producing or can be shown to contain minerals that are expected to be commercially producible. The record shows that these criteria have been met.

These exemptions apply only to the injection of fluids into those portions of the Oakville Sandstone and Goliad Formations as proposed in the applications. Injection of other fluids (e. g. hazardous wastes) or injection of fluids into other formations that qualify as underground sources of drinking water would require additional approval.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

July 1, 1994

REPLY TO: 6W-SU

Mr. Anthony C. Grigsby  
Executive Director  
Texas Natural Resource Conservation  
Commission  
P.O. Box 13087  
Austin, TX 78711-3087

Dear Mr. Grigsby:

I am pleased to inform you of EPA approval of your request for an aquifer exemption extension for a portion of the Goliad Formation from the Underground Injection Control (UIC) program requirement that no fluid may be injected into an Underground Source of Drinking Water (USDW). This approval is based upon the criteria stipulated in 40 CFR §144.7(b) & (c)(1), §145.32, and §146.4 containing regulations allowing an aquifer to be exempted if: (a) It does not currently serve as a source of drinking water; and (b) it cannot be used as a drinking water source in the future because it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible. This approval will allow injection for in-situ uranium mining only. If injection for other purposes (e.g. hazardous waste) is planned into this aquifer, additional approval will be needed.

The approved exempted portion of the aquifer underlies the Uranium Resources, Inc. Kingsville Dome Project in Kleberg County and is limited to the Upper Goliad Formation. A detailed description of the exempted portion of the aquifer remains in the exemption extension request and subsequent comment letters.

We recommend that in future Production Area Authorization (PAA) actions that closer monitor well spacing and more frequent monitor well sampling be incorporated in PAA's that are in closer proximity to private water wells located in the buffer zone.

If you have any questions concerning this approval, please contact me or have your staff contact Brian Graves at (214) 655-7193. Thank you for your continued cooperation.

Sincerely Yours,

  
Myron O. Knudson, P.E.  
Director  
Water Management Division (6W)

cc: Alice Hamilton Rogers (TNRCC)

**Attachment 2**

**Water Well Inventories**

U.S. STEEL'S  
URANIUM  
MINES -  
SOUTH TEXAS

1890

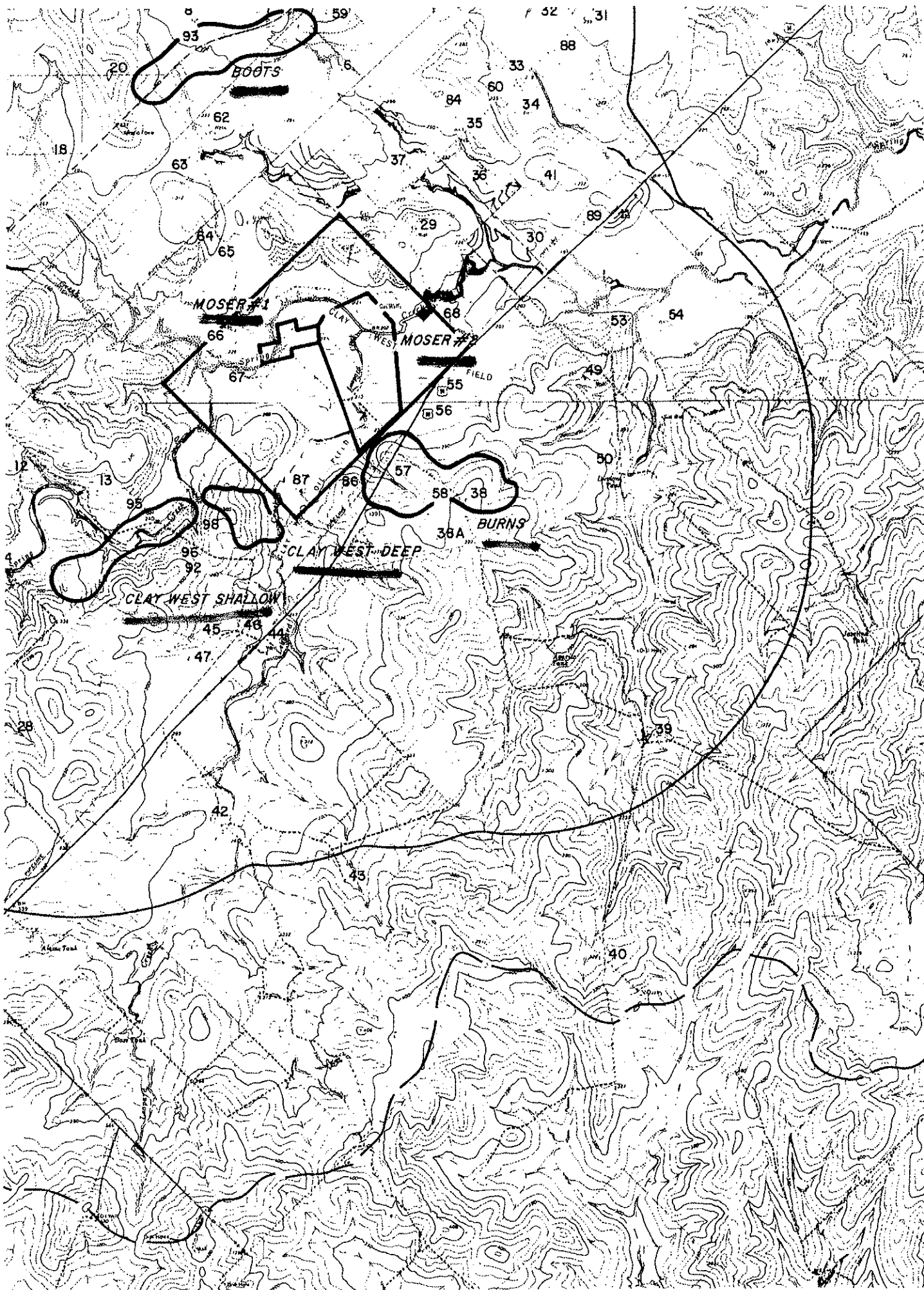
MOSER II MINING PROJECT  
Application to Texas Department of  
Water Resources  
Texas Uranium Operations  
U.S.S.C. - N.M.U., Inc.  
July, 1978

*Submitted to the Texas Department of Water Resources  
July 1978*

Table 7A - Area Water Wells

|                               |                                  |
|-------------------------------|----------------------------------|
| 1. Mrs. Anton Pawlik H.C.     | 51. Otis Derrough H.C.           |
| 2. Mrs. Anton Pawlik          | 52. Otis Derrough H.C.           |
| 3. Wilbert Geffert H.C.       | 53. Kittie West Burns H.C.       |
| 4. Bill Smithey H.C.          | 54. Kittie West Burns            |
| 5. Leopold Wojtaszyk H.C.     | 55. US Steel Burns Central I     |
| 6. Sonny Whitley H.C.         | 56. US Steel Burns Central II    |
| 7. Rufus Geffert H.C.         | 57. US Steel Burns Satellite I   |
| 8. Lucio Chapa H.C.           | 58. US Steel Dalco Pilot         |
| 9. J. R. Lyne H.C.            | 59. Mary Brown H.C.              |
| 10. J. R. Lyne                | 60. Joe Burrell H.C.             |
| 11. L. J. Lyne                | 61. Dude Tullis                  |
| 12. L. J. Lyne                | 62. W. B. Moser H.C.             |
| 13. L. J. Lyne H.C.           | 63. W. B. Moser                  |
| 14. J. R. Lyne                | 64. W. B. Moser                  |
| 15. L. R. Hoskins             | 65. W. B. Moser                  |
| 16. Lester Davis H.C.         | 66. W. B. Moser                  |
| 17. Lester Davis              | 67. W. B. Moser-US Steel         |
| 18. Mrs. Robert Nesloney H.C. | 68. W. B. Moser                  |
| 19. Mrs. Robert Nesloney      | 69. Emil Richter H.C.            |
| 20. Doyle Davis H.C.          | 70. Arthur Richter H.C.          |
| 21. Gus Houdmann              | 71. Pablo Ybanez H.C.            |
| 22. August Geffert, Jr.       | 72. Pablo Ybanez                 |
| 23. E. A. Hinea H.C.          | 73. Henry Lyssey H.C.            |
| 24. Bobby Steinmeyer          | 74. Bobby Richter H.C.           |
| 25. Bobby Steinmeyer          | 75. Arthur Richter               |
| 26. Ethel O'Neal              | 76. Larry Brand H.C.             |
| 27. Mrs. Johnnie Paul         | 77. Steve Linholm                |
| 28. Mrs. Johnnie Paul         | 78. Taverino Alvarez H.C.        |
| 29. Alfredo Garza H.C.        | 79. Frutosa Ybanez H.C.          |
| 30. Pete Perkins              | 80. Marnie Johnson               |
| 31. Dude Tullis H.C.          | 81. Marnie Johnson               |
| 32. Walter Bednorz H.C.       | 82. J. T. Lyne H.C.              |
| 33. Hermina Musseman H.C.     | 83. J. D. Prosen H.C.            |
| 34. Hermina Musseman H.C.     | 84. Dale Burrell H.C.            |
| 35. Bobby Younts H.C.         | 85. Terry Stewart H.C.           |
| 36. Lee Muennink H.C.         | 86. Mrs. Clay West Burns         |
| 37. Sherman Clifton H.C.      | 87. Arco Gas Plant               |
| 38. Mrs. Clay West Burns H.C. | 88. Wilfred Katzfey H.C.         |
| 38A. Mrs. Clay West Burns     | 89. Campbell and Taylor H.C.     |
| 39. Mrs. Clay West Burns      | 90. Joe W. Huffman               |
| 40. Mrs. Clay west Burns      | 91. Lester Davis                 |
| 41. Coley Burrell H.C.        | 92. US Steel - Central           |
| 42. J. T. Lyne H.C.           | 93. US Steel - Boots             |
| 43. J. T. Lyne                | 94. Billy Smithey                |
| 44. J. T. Lyne                | 95. US Steel - Arco Pilot        |
| 45. Fred Johnson H.C.         | 96. US Steel - Clay West Shallow |
| 46. Fred Johnson              | 97. Jack Shanklin H.C.           |
| 47. Fred Johnson              | 98. US Steel - Clay West Deep    |
| 48. Fred Johnson              | 99. Fred Johnson H.C.            |
| 49. Emma Lennox H.C.          |                                  |
| 50. Emma Lennox H.C.          |                                  |

Burns Ranch area water wells





# Mobil Oil Corporation

P.O. BOX 2688  
CORPUS CHRISTI, TEXAS 78403

ENERGY MINERALS DIVISION — U.S.

SEPTEMBER 5, 1978

MR. A. E. RICHARDSON  
TEXAS DEPARTMENT OF WATER RESOURCES  
P. O. Box 13087  
CAPITOL STATION  
AUSTIN, TEXAS 78711

RECEIVED

SEP 11 1978

PERMIT CONTROL  
TDWR

NELL PLANT  
APPLICATION FOR PERMIT

DEAR MR. RICHARDSON:

MOBIL OIL CORPORATION, ENERGY MINERALS - U. S. IS SUBMITTING FOR YOUR REVIEW AND ACTIONS AN IN SITU URANIUM LEACH PROCESSING PLANT PERMIT APPLICATION. THE APPLICATION COVERS A COMMERCIAL PLANT TO PROCESS THE NELL PRODUCTION AREA PERMIT WHICH IS SUBMITTED UNDER A SEPARATE COVER.

THE NELL PLANT WILL BE CONSTRUCTED ON A 7.34 ACRE AREA WITHIN THE NELL PROJECT LOCATED APPROXIMATELY FOUR MILES WEST OF PAWNEE IN BEE AND LIVE OAK COUNTIES, TEXAS. THE PLANT WILL PROCESS LEACH SOLUTIONS FROM NUMEROUS ORE BODIES OVER THE REGIONAL AREA. THE MINE AREAS WILL BE MINED AND RESTORED IN A PROGRESSIVE MANNER.

THE ATTACHED MINING AND RESTORATION PLAN IS TENTATIVE. HOWEVER, IT IS BASED UPON CONCEPTS AND FACTS DRAWN FROM THE DESIGN CRITERIA

ATTACHMENT 7 -- WATER SUPPLY WELLS

A. Permit Area Vicinity Wells

Thirty area water wells have been located within a two mile radius of the permit area. The attached Nell Project Domestic Well Location map shows the well location and well number. The following is a list of well numbers, owners, depth of well and well usage which are keyed to the location map by well number.

| <u>Well No.</u> | <u>Owner</u>   | <u>Depth</u> | <u>Usage</u>                     |
|-----------------|--|--------------|----------------------------------|
| 1               | Anita Gaebler<br>Rt. 1<br>Yorktown, Texas 78164<br>(512) 564-3049                    | 100'         | Livestock                        |
| 2               | Bode Stolte<br>St. Rt. 1<br>Kenedy, Texas 78119<br>(512) 583-2802                    | 164'         | Livestock                        |
| 3               | James Kunde<br>St. Rt. 1, Box 38<br>Kenedy, Texas 78119<br>(512) 583-3140            | 190'         | Livestock                        |
| 4               | Same as above  | 70'          | Livestock                        |
| 5               | Douglas Arnold<br>Superintendent of Schools<br>Pawnee, Texas 78145<br>(512) 456-7256 | 120'         | Livestock                        |
| 6               | Juan Salas<br>St. Rt. 1<br>Kenedy, Texas 78119<br>(512) 583-2649                     | 136'         | Human<br>Livestock<br>Irrigation |
| 7               | Estaban Ureste<br>St. Rt. 1, Box 5<br>Kenedy, Texas 78119<br>(512) 583-3155          | 17'          | Livestock                        |
| 8               | Martin Lieke<br>St. Rt. 1, Box 21<br>Kenedy, Texas 78119<br>(512) 583-2936           | 300'         | Livestock                        |
| 9               | R. W. Retzloff<br>607 School Street<br>Kenedy, Texas 78119<br>(512) 583-2282         | 121'         | Human<br>Livestock               |

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PERMIT CONTROL  
TDWR

| Well No. | Owner  | Depth | Usage                              |
|----------|--|-------|------------------------------------|
| 10       | Al Baker<br>Helena Road<br>Kenedy, Texas 78119<br>(512) 583-2340                       | 160'  | Livestock                          |
| 11       | R. C. Franklin<br>Box 479<br>Kenedy, Texas 78119<br>(512) 583-2648                     | 575'  | Livestock                          |
| 12       | Vernon Gustafson<br>3738 Harris Drive<br>Corpus Christi, Texas 78411<br>(512) 855-8731 | 72'   | Human ✓<br>Livestock<br>Irrigation |
| 13       | E. P. Ruhmann<br>Box 26<br>Kenedy, Texas 78110<br>(512) 583-2184                       | 30'   | Livestock                          |
| 14       | Clay B. McCarn<br>Box 523<br>Pawnee, Texas 78145<br>(512) 456-7396                     | 80'   | Human ✓<br>Livestock               |
| 15       | Gus Gaisler<br>C/o General Delivery<br>Pawnee, Texas 78145                             | 120'  | Human ✓<br>Livestock               |
| 16       | Same as above  | 120'  | Human ✓<br>Livestock               |
| 17       | Gregorio Munoz<br>C/o General Delivery<br>Pawnee, Texas 78145                          | 130'  | Human ✓<br>Livestock               |
| 18       | Ernest Wolff<br>C/o General Delivery<br>Pawnee, Texas 78145<br>(512) 456-7347          | 120'  | Human ✓<br>Livestock<br>Irrigation |
| 19       | Bob Ford<br>St. Rt. 1<br>Kenedy, Texas 78119<br>(512) 583-3112                         | 47'   | Human ✓<br>Livestock               |
| 20       | Same as above  | 80'   | Human ✓                            |
| 21       | Same as above  | 80'   | Human ✓<br>Livestock               |

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SEP 11 1978

PERMIT CONTROL  
TDWR

| <u>Well No.</u> | <u>Owner</u>   | <u>Depth</u> | <u>Usage</u>         |
|-----------------|--|--------------|----------------------|
| 22              | Joe Ford<br>St. Rt. 1<br>Kenedy, Texas 78119<br>(512) 583-3112   | 32'          | Livestock            |
| 23              | Same as above  | 32'          | Human ✓              |
| 24              | Walter Wernli<br>St. Rt. 1<br>Kenedy, Texas 78119<br>(512) 456-7337                                    | 50'          | Human ✓              |
| 25              | Leo J. Schanen<br>105 Kissling<br>Robstown, Texas 78380<br>(512) 387-3028                              | 126'         | Livestock            |
| 26              | A. N. Wells<br>Highway 181 Bypass<br>Karnes City, Texas<br>(512) 780-3800                              | 113'         | Human ✓<br>Livestock |
| 27              | Sam E. Hoff<br>St. Rt. 1<br>Kenedy, Texas 78119<br>(512) 583-2697                                      | 600'         | Human ✓<br>Livestock |
| 28              | Same as above  | 650'         | Livestock            |
| 29              | Same as above  | 175'         | Human ✓<br>Livestock |
| 30              | Bessie Harbeck<br>C/o Ed Strurcken<br>296 Calhoun<br>Box 1785<br>Kenedy, Texas 78119<br>(512) 583-2131 | 100'         | Livestock            |

RECEIVED

SEP 11 1978

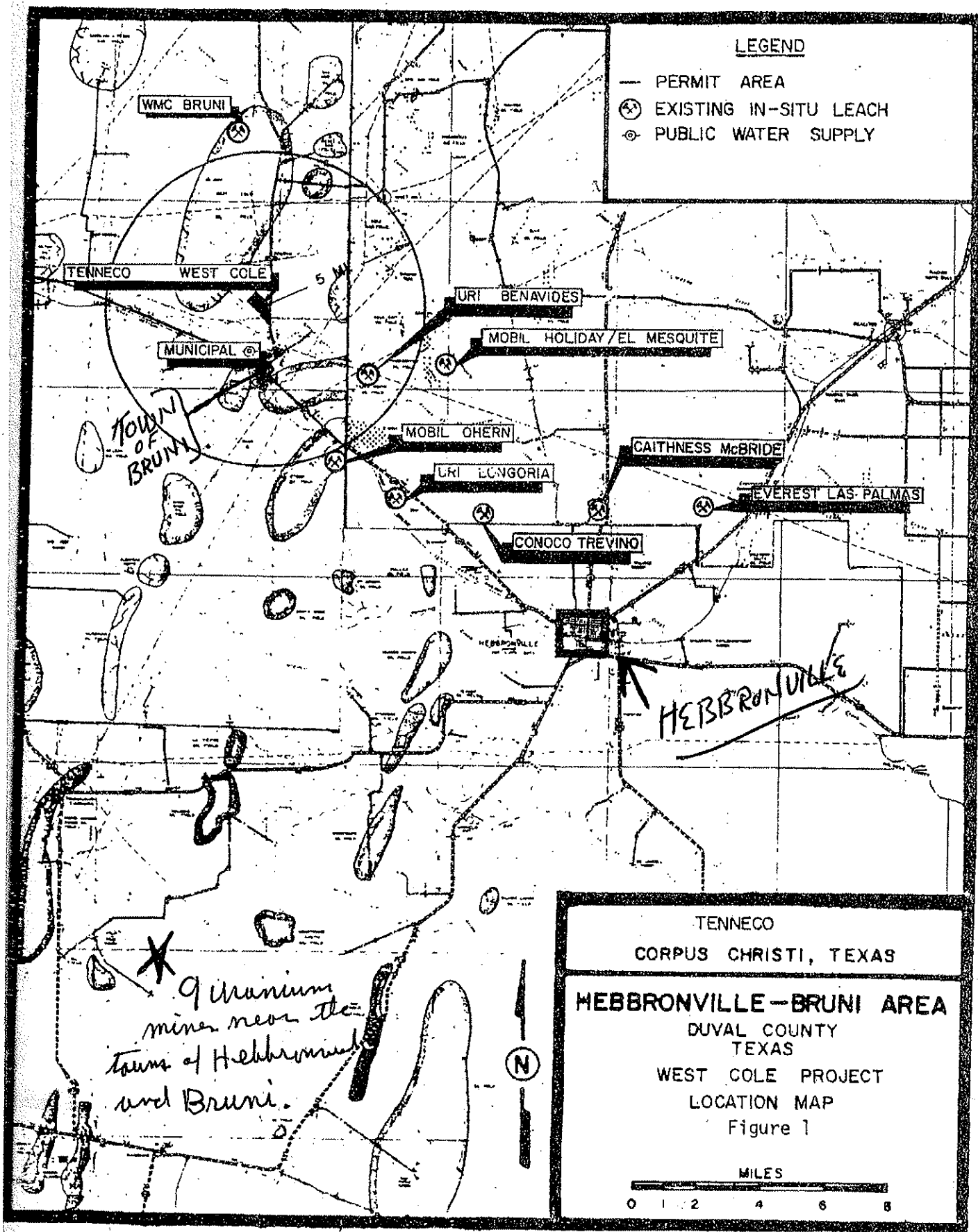
PERMIT CONTROL  
TDWR

**TRCB EA-6**

**ENVIRONMENTAL ASSESSMENT  
RELATED TO  
TENNECO URANIUM, INC.  
WEST COLE PROJECT  
WEBB COUNTY, TEXAS**



**Radiation Control Branch  
Division of Occupational Health  
and Radiation Control  
Texas Department of Health  
May 29, 1981**



- 5) the Mobil Oil Corporation/Energy Minerals Division, U.S. and Canada Holiday/El Mesquite Project (Duval County)
- 6) the Mobil Oil Corporation/Energy Minerals Division, U.S. and Canada Piedre-Lumbre/Brelum Project (Duval County)
- 7) the Chevron Resources Palangana Dome Project (Duval County)
- 8) the Uranium Resources Inc. Longoria Project (Duval County)
- 9) the Uranium Resources Inc. Benavides Project (Duval County)
- 10) the Wyoming Mineral Corporation Bruni Project (Webb County)

## 2.5 Seismology

It can be seen in Figures 5 and 6 there has been no record of seismic events (V or greater) between the latitudes 25 and 30 degrees north and longitudes of 95 and 100 degrees west. The seismic history of the West Cole Project area, which lies in this region, is considered insignificant with no foreseeable seismic related damage probabilities (Figure 7).

## 2.6 Hydrology

No perennial surface water bodies exist within 3.2 km of the permit area. All surface water features of this area are either intermittent or ephemeral. Figure 2 is representative of runoff from meteoric waters for the area, showing a southeasterly direction in the Arroyo de los Angeles Drainage Basin. Stock tanks in the area are supplied from ground-water sources.

### 2.6.1 Ground Water

Local ground water occurs in four identifiable clastic units at the West Cole Project Area. These clastic units are all within the Soledad Volcanics of the Catahoula Formation. The piezometric surface of the production zone completion interval averages 225 meters MSL. Well yield from the production zone averages 38 to 57 liters per minute. Permeabilities range from 0.52 to 0.96 meter/day. The hydraulic gradient is approximately 0.57 m/kilometer to the southeast. Hydrologic testing for natural or artificial cross communication yielded negative results. Data from this test are on file with the Texas Department of Water Resources and the Texas Department of Health.

#### 2.6.1.1 Water Supply Wells in the Project Vicinity

Within 3.2 kilometers of the West Cole Project, there are 28 water supply wells. Of these 28 wells, 23 were sampled with the respective landowner's permission. Because of the age and lack of record keeping, well completion data for these wells is minimal.

Information pertaining to the location, ownership, elevation, water level, and water quality is provided in Table 2. Well numbers as listed in the table are keyed to well locations found in Figure 8. Field analysis for these wells are reported in Table 3. Laboratory analyses for the 23 wells sampled are given in Appendix 1.



# Total Minerals Corporation

West Cole Project

LIC. REGIS. & SIND. 11

May 23, 1989

89 MAY 23 AM 11 37

Mr. David K. Lacker  
Bureau Chief  
TEXAS DEPARTMENT OF HEALTH  
Bureau of Radiation Control  
1100 West 49th Street  
Austin, Texas 78756-3189

BUREAU OF  
RADIATION CONTROL

Re: Application For an Amendment to RML L03024  
Total Minerals Corporation - West Cole Project

Dear Mr. Lacker:

Total Minerals Corporation, owner and operator of the West Cole in-situ uranium project near Bruni, Texas, is herewith submitting an application for an amendment to its current RML number L03024.

In an effort to expedite your review, we will be available at any time to meet with you or your staff to answer any questions which may arise or to provide any additional information which may be required.

Enclosed please find thirteen copies of the application.

Sincerely,

Charles J. Foldenauer  
Production Manager

cc: D. Benavides  
J. Graham  
A. McNeill

Enclosure:



In addition to the ephemeral drainages noted above, there are several shallow depressions on and adjacent to the permit area. The depressions are highlighted on Figure 8-3. The depressions retain water for a short period of time after a significant rainfall event, but because of infrequent and low annual rainfall and high evaporation rates, they are usually dry. It can also be noted from Figure 8-3 that the shallow depressions are relatively small and do not account for a significant portion of the permit area.

No perennial surface water features exist within or adjacent to the permit area. The only nearby surface water includes three concrete stock tanks and a small pond. The pond and concrete stock tanks are maintained by nearby water wells. The locations of the pond and stock tanks are shown on Figure 8-3. Water samples were collected from the stock tanks and pond, as well as from numerous water supply wells within 1 Km of the permit area boundary.

In addition, TWC regional water wells were sampled. Well locations shown on Figure 8-3 are keyed to Table 8.1 which gives the chemical and radiochemical characteristics of each well; locations are also keyed to Table 8.2 which shows well owners, completion data, water level, and aquifer. The aquifer information given on Table 8.2 is keyed to Figure 8-4.

Prior and subsequent to collecting water well samples, state well records at the TWC were reviewed to locate area wells and to obtain a history of each well. To supplement data gathered from state records, well owners were interviewed. The purpose of the interviews was to obtain information about when the wells were drilled, how they are used (domestic use, irrigation, public use, etc.), and what kind of casing was used (pvc, steel, fiberglass). Information on production and completion method and water level was also recorded when available.

When the water well inventory was conducted, a total of 36 wells were identified within 1Km of the permit boundary. Following the inventory, the permit boundary was reduced and consequently many of the wells shown on Figure 8-3 are outside the 1 Km zone. Since the wells had already been sampled, it was decided to include the results in the baseline report.

Nineteen of the 36 wells being discussed here were sampled in 1980 when the original West Cole project was permitted - these wells are identified with the prefix T, and one well with the prefix

Table 8.2 Water Well Inventory, Total Minerals Corporation, West Cole Expansion

| Well No.* | Well Owner  | Production Method | Well Use     | Date Drilled | Total Depth | Aquifer Name** | Casing Type | Completion Method         | Water Level |
|-----------|---|-------------------|--------------|--------------|-------------|----------------|-------------|---------------------------|-------------|
| T-1       | Larry G. Lowe<br>P.O. Box 130<br>Bruni, Tx. 78344           | Submersible       | Domestic ✓   | 1977         | 210         | 12(5b)         | PVC         | Slotted w/<br>Perforation | 40          |
| T-2       | Polcarpio Vasquez<br>P.O. Box 44<br>Bruni, Tx. 78344        | Submersible       | Domestic ✓   | 1978         | 267         | 20             | PVC         | Slotted w/<br>Perforation | 48          |
| T-3       | Javier Carrizales<br>P.O. Box 232<br>Bruni, Tx. 78344       | Submersible       | Domestic ✓   | 1960         | 190         | 12(5b)         | PVC         | Perforated                | 40          |
| T-4       | Rolando Falcon<br>P.O. Box 72<br>Bruni, Tx. 78344           | Submersible       | Domestic ✓   | 1960         | 190         | 12(5b)         | PVC         | Perforated                | 40          |
| T-5       | Bruni School System<br>P.O. Box 206<br>Bruni, Tx. 78344     | Submersible       | Domestic ✓   | 1967         | 345         | 26             | Steel       | Slotted                   | X           |
| T-6       | Bruni School<br>P.O. Box 206 Irrigation<br>Bruni, Tx. 78344 | Submersible       | Domestic ✓   | 1966         | 340         | 26             | Steel       | Slotted                   | 84.5        |
| T-7V.     | Vasquez<br>P.O. Box 53<br>Bruni, Tx. 78344                  | Windmill          | Irrigation X |              | 270         | 20             | PVC         | Perforated                | X           |

Table 8.2 Water Well Inventory, Total Minerals Corporation, West Cole Expansion (Continued)

| Well No.* | Well Owner  | Production Method | Well Use   | Date Drilled | Total Depth | Aquifer Name** | Casing Type | Completion Method | Water Level |
|-----------|---|-------------------|------------|--------------|-------------|----------------|-------------|-------------------|-------------|
| T-8       | Bruni Water Works<br>P.O. Box 192<br>Bruni, Tx. 78344                       | Turbine           | Industrial | 1953         | 407         | 26             | Steel       | Slotted           | X           |
| T-9       | Bruni Water Works<br>City Water Supply<br>P.O. Box 19<br>Bruni, Texas 78344 | Submersible       | Domestic   | 1967         | 360         | 26             | Steel       | Slotted           | X           |
| T-10      | Bruni Water Works<br>City Water Supply<br>P.O. Box 192<br>Bruni, Tx. 78344  | Submersible       | Domestic   | 1969         | 360         | 26             | Steel       | Slotted           | X           |
| T-11      | L. Valdez<br>P.O. Box 94<br>Bruni, Tx. 78344                                | Windmill          | Domestic   | 1930         | 400         | 26             | Steel       | X                 | 74.5        |
| T-12      | W.L. Clawitz/<br>B. Kohetck<br>P.O. Box 33<br>Bruni, Tx. 78344              | Submersible       | Domestic   | 1967         | 273         | 20             | Steel       | Slotted           | 80          |
| T-13      | W. Reyes<br>P.O. Box 93<br>Bruni, Tx. 78344                                 | Submersible       | Domestic   | 1978         | 320         | 26             | PVC         | Slotted           | X           |

Table 8.2 Water Well Inventory, Total Minerals Corporation, West Cole Expansion (Continued)

| Well No.: | Well Owner                                      | Production Method | Well Use               | Date Drilled | Total Depth | Aquifer Name | Casing Type | Completion Method | Water Level |
|-----------|---|-------------------|------------------------|--------------|-------------|--------------|-------------|-------------------|-------------|
| T-14      | John S. Long<br>P.O. Box 266<br>Bruni, Tx 78344 | Submersible       | Domestic               | X            | 250         | 20           | Steel       | X                 | X           |
| T-15      |   |                   |                        |              |             |              |             |                   |             |
| T-16      | A.T. Benavides<br>P.O. Box 1<br>Bruni, Tx 78344 | Submersible       | Livestock              | X            | X           | X            | Steel       | X                 | X           |
| T-17      |   |                   |                        |              |             |              |             |                   |             |
| T-18      |   |                   |                        |              |             |              |             |                   |             |
| T-19      |   |                   |                        |              |             |              |             |                   |             |
| T-20      | A.T. Benavides<br>P.O. Box 1<br>Bruni, Tx 78344 | Submersible       | Domestic/<br>Livestock | X            | X           | X            | Steel       | X                 | X           |
| T-21      | A.T. Benavides<br>P.O. Box 1<br>Bruni, Tx 78344 | Submersible       | Domestic               | 1979         | 326         | 20           | PVC         | Screened          | 68          |
| T-22      | A.T. Benavides<br>P.O. Box 1<br>Bruni, Tx 78344 | Windmill          | Livestock              | X            | X           | X            | Steel       | X                 | X           |

Table 8.2 Water Well Inventory, Total Minerals Corporation, West Cole Expansion (Continued)

| Well No.* | Well Owner  | Production Method | Well Use  | Date Drilled | Total Depth | Aquifer Name** | Casing Type | Completion Method | Water Level |
|-----------|---|-------------------|-----------|--------------|-------------|----------------|-------------|-------------------|-------------|
| B-13      | Robert J. Bruni<br>Century Bldg.<br>Suite 121 E.<br>84 N.E. Loop 410<br>San Antonio, Tx 78216 | Windmill          | Livestock | X            | X           | X              | Steel       | X                 | X           |
| W-1       | Jesús Vela Cuellar<br>520 Victoria Street<br>Laredo, Texas 78040                              | X                 | X         | X            | X           | X              | X           | X                 | X           |
| W-2       | Jerry Williamson<br>Ave. F & 4th<br>Bruni, Tx 78344   | Submersible       | Domestic  | 1987         | 260         | 20             | Fiber-glass | Slotted           | X           |
| W-3       | Manuel Longoria<br>1408 Mier St.<br>Laredo, Texas 78040                                       | Windmill          | Livestock | X            | X           | X              | X           | X                 | X           |
| W-4       | Jesús Lopez<br>9th & 2050<br>Bruni, Tx 78344  | Submersible       | Domestic  | 1987         | 262         | 20             | PVC         | Slotted           | X           |
| W-5       | Carol Brice<br>8th & Ave. C<br>Bruni, Tx 78344  | Submersible       | Domestic  | 1982         | 185         | 12(5b)         | Fiber-glass | Slotted           | 45          |
| W-6       | Homero Chapa<br>P.O. Box 143<br>Bruni, Tx 78344   | Submersible       | Domestic  | 1986         | 320         | 26             | PVC         | Slotted           | 100         |

Table 8.2 Water Well Inventory, Total Minerals Corporation, West Cole Expansion (Continued)

| Well No.* | Well Owner                                       | Production Method | Well Use   | Date Drilled | Total Depth | Aquifer Name** | Casing Type | Completion Method | Water Level |
|-----------|--|-------------------|------------|--------------|-------------|----------------|-------------|-------------------|-------------|
| W-7       | Jose Gutierrez<br>P.O. Box 3<br>Bruni, Tx. 78344 | Submersible       | Domestic   | 1988         | 270         | 20             | PVC         | X                 | X           |
| W-8       | Robert Bruni                                     | X                 | X          | X            | X           | X              | X           | X                 | X           |
| W-9       | Paula Harper<br>P.O. Box 131<br>Bruni, Tx. 78344 | X                 | X          | X            | X           | X              | X           | X                 | X           |
| W-10      | Paula Harper<br>P.O. Box 131<br>Bruni, Tx. 78344 | Submersible       | Domestic   | 1985         | 360         | 20             | Fiber-glass | X                 | X           |
| W-11      | William Lowe<br>P.O. Box 128<br>Bruni, Tx. 78344 | Submersible       | Domestic   | 1978         | 300         | 20             | PVC         | Slotted           | 32.5        |
| W-12      | William Lowe<br>P.O. Box 128<br>Bruni, Tx. 78344 | Submersible       | Industrial | 1981         | 320         | 20             | PVC         | Slotted           | 80          |
| W-13      | William Lowe<br>P.O. Box 128<br>Bruni, Tx. 78344 | Submersible       | Industrial | 1986         | 440         | 26             | PVC         | Slotted           | 80          |

Table 8.2 Water Well Inventory, Total Minerals Corporation, West Cole Expansion (Continued)

| Well No.* | Well Owner  | Production Method | Well Use   | Date Drilled | Total Depth | Aquifer Name** | Casing Type | Completion Method | Water Level |
|-----------|---|-------------------|------------|--------------|-------------|----------------|-------------|-------------------|-------------|
| W-14      | William Lowe<br>P.O. Box 128<br>Bruni, Tx. 78344  | Submersible       | Industrial | 1982         | 740         | 50             | PVC         | Slotted           | X           |
| W-15      | Leticia Munoz<br>P.O. Box 214<br>Bruni, Tx. 78344 | Submersible       | Domestic   | 1985         | 285         | 20             | PVC         | Slotted           | X           |
| W-16      | Arturo Melo<br>P.O. Box 115<br>Bruni, Tx. 78344   | Submersible       | Domestic   | 1986         | 280         | 20             | PVC         | Perforated        | 45          |
| W-17      | Albert Harris<br>P.O. Box 212<br>Bruni, Tx. 78344 | Submersible       | Domestic   | 1988         | 170         | 12(5b)         | PVC         | Slotted           | X           |

Notes:

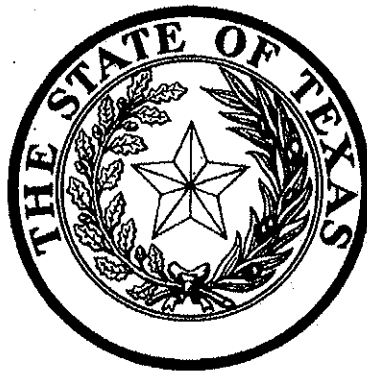
\*Wells T-1 through T-22 and B-13 were sampled for baseline elements in 1980 - the 1980 baseline analyses, however, did not include copper and thorium-230. To bring these wells current, they were sampled and analyzed for copper and thorium-230 in August of 1988.

\*\* See Figure 8-4 for aquifer name and location.

X Unknown

.... Not sampled in 1988 - wells are too far outside proposed permit area. These wells were sampled for baseline elements in 1980, and the analyses can be found in Appendix 1 of TRCB EA-6.

**ENVIRONMENTAL ASSESSMENT  
AND  
SAFETY EVALUATION REPORT  
RELATED TO THE RENEWAL OF  
LICENSE NO. 8-2538  
WYOMING MINERAL CORPORATION  
LAMPRECHT PROJECT  
LIVE OAK COUNTY, TEXAS**



**Bureau of Radiation Control  
Texas Department of Health**

**October 11, 1983**



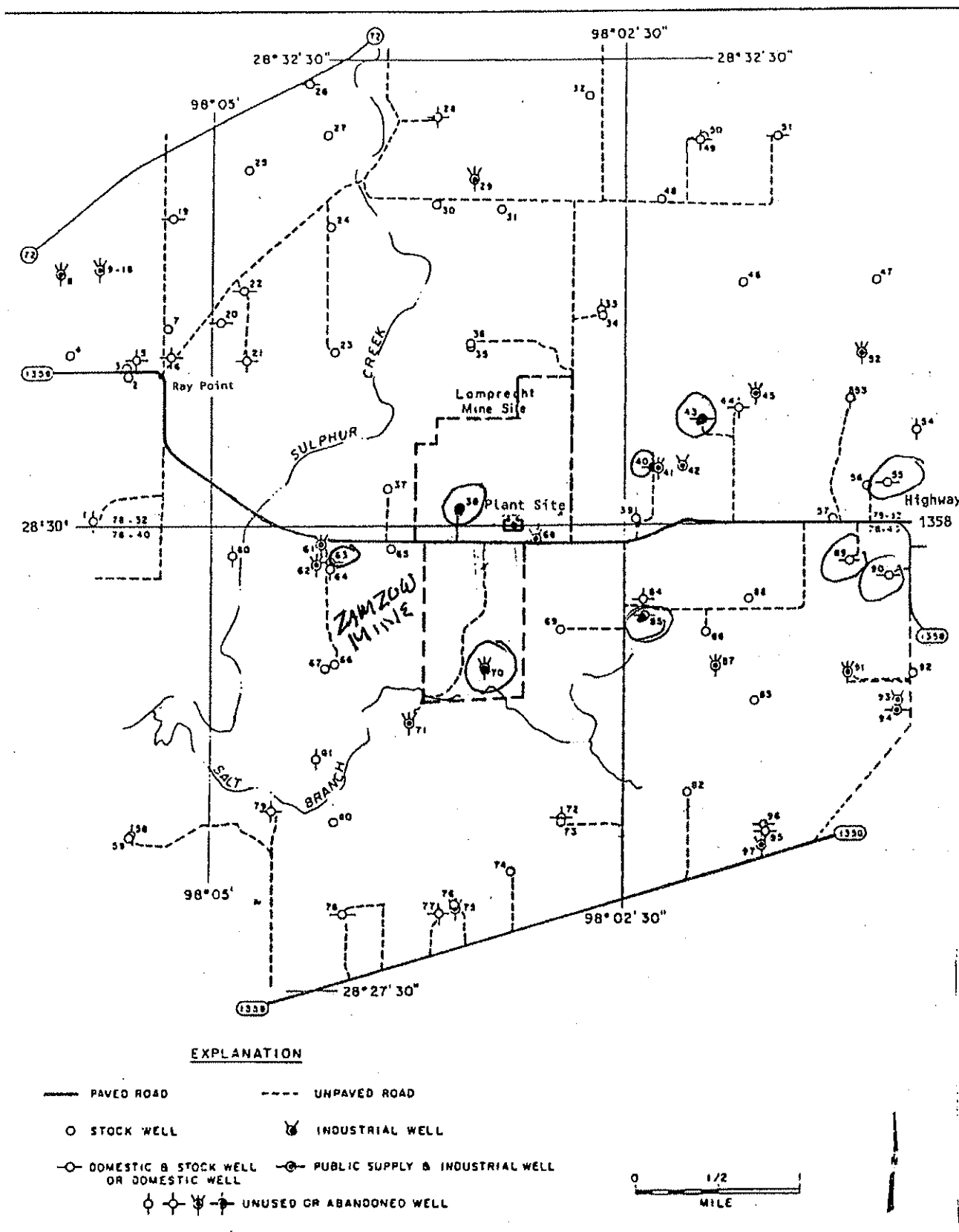


Figure 1 Location of Water Wells at the Lamprecht Facility and Vicinity

**ENVIRONMENTAL ASSESSMENT,  
SAFETY EVALUATION REPORT, AND  
PROPOSED LICENSE CONDITIONS  
RELATED TO THE TEXACO INC. —  
SUNOCO ENERGY DEVELOPMENT COMPANY  
HOBSON TEX-1 PROJECT  
KARNES COUNTY, TEXAS**



**BUREAU OF RADIATION CONTROL  
TEXAS DEPARTMENT OF HEALTH  
APRIL 3, 1984**

area cities own their water supplies. Falls City is served by a wastewater stabilization pond system which has been overloaded for several years. The other area cities have adequate wastewater treatment facilities (Conoco, 1980a).

Area schools (Floresville, Falls City, Karnes City, Kenedy, and Runge) had a total student enrollment of 4723 in the 1978-1979 school year (Conoco, 1980a). The teacher to pupil ratio in these schools varied from 1:11 in Kenedy to 1:16 in Karnes City. There has been a decrease in student enrollment over the past decade in the Falls City, Kenedy, and Runge schools. Student enrollment has increased annually by 1.3% in the Floresville schools and by 0.5% in the Karnes City schools during the past decade.

## 2.4 Land Use

### 2.4.1 Region

Most land in Karnes County is used for farming and ranching. Major field crops are corn and grain sorghums. Other field crops are flax, oats, wheat, and hay. Some peaches, pecans, and vegetables are also grown. Beef cattle are the major livestock produced in the county. Dairy cattle, poultry, and swine are also produced. Other land uses include urban development, transportation routes, manufacturing and commercial enterprises, and mineral recovery. Mineral production, although constituting a minor land use, is a significant revenue source for the county. Road base materials, gas, oil, and uranium are produced.

### 2.4.2 Site

Land use on the Hobson Tex-1 site generally reflects that of Karnes County. Much of the site has been cleared of woody vegetation, and most woody species are now restricted to isolated upland tracts and to areas bordering waterways. The proposed license area is within the Hobson Oil Field. Most of the site is used for beef cattle production (Figure 2.4-1). Cattle graze on rangeland, fallow cropland, and improved pastures. Corn and grain sorghum are also grown on the site.

Within the proposed license area are three residences, a pipeline easement, several producing oil wells, an oil field brine disposal well, several stock ponds, roadways, and oil recovery and storage facilities. Several abandoned caliche quarries are also present on the site.

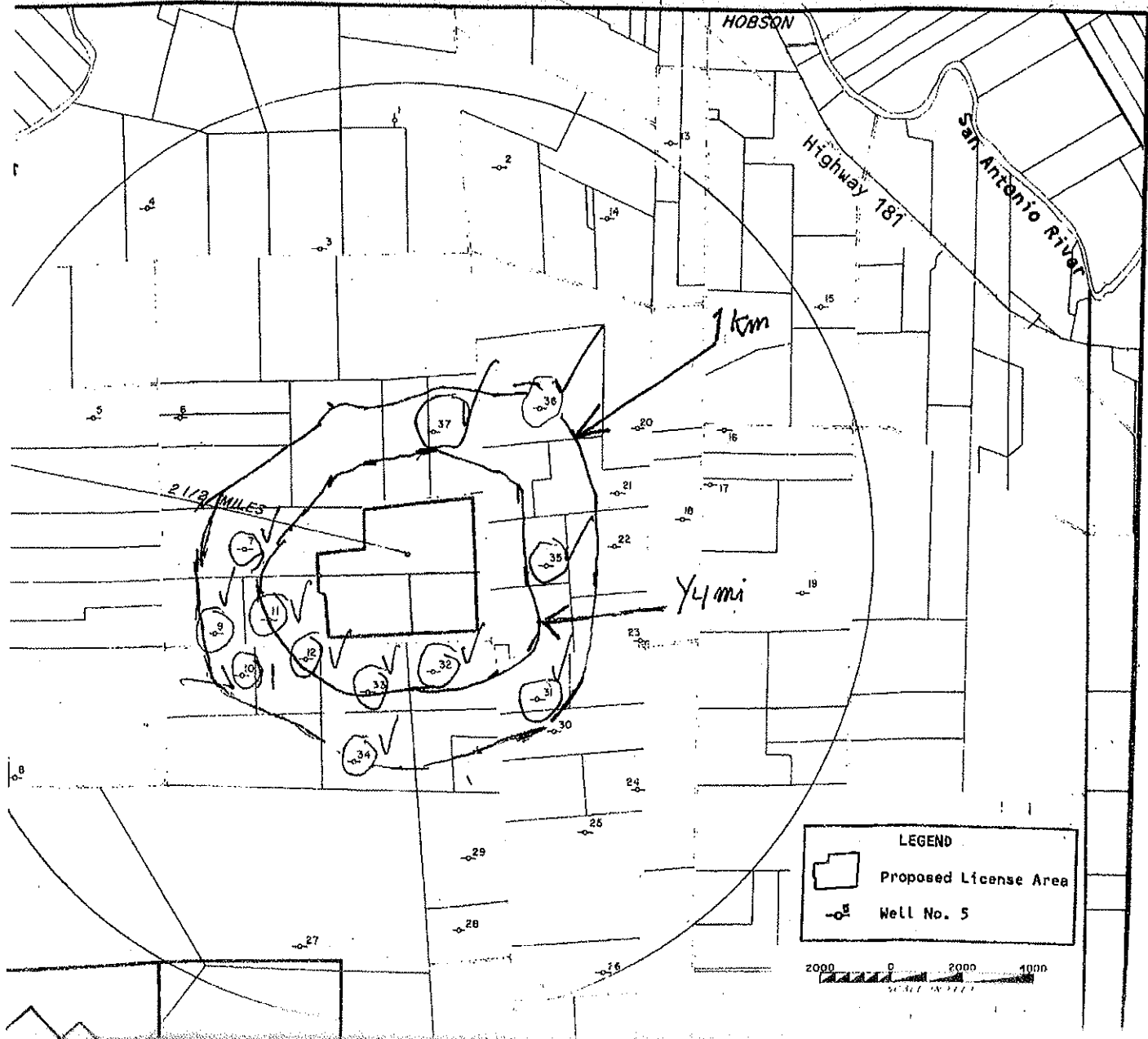
confining layer, the Conquista Clay, has been discussed previously (see Figure 2.6-8 and section 2.6.3.2). The problem of the ability of the Conquista Clay to perform as a confining layer is compounded somewhat by uncertainties in the identification of the screened intervals of the nearest water wells. Thickness considerations would be of less significance if it were known that the nearest wells do not use the underlying aquifer as a water source.

The mining zone at the Hobson Tex-1 project is both underlain and overlain by strata which, if not actually producing, are at least capable of providing water to wells. The first underlying aquifer, the Dilworth Sandstone, is separated from the production zone by the Conquista Clay (see Table 2.6-1 and Figure 2.6-7). No hydrologic data are available for this unit. The first aquifer overlying the ore zone and separated from it by the Dubose Clay is the Tordilla Sandstone. Figure 2.7-8 shows the piezometric surface of the Tordilla in the area of the Hobson Tex-1 site. This figure, from the applicant's environmental report (Texaco, 1981a), was originally labelled a "shallow water table map." Well log cross sections and specific references within the text indicate, however, that the aquifer is confined. Hence, the surface contoured is properly the piezometric surface. Within the shallow aquifer there is a northwest-southeast trending hydraulic divide (groundwater ridge) in essentially the same area as the second ridge identified in the ore zone aquifer. In the southwest corner of the proposed license area, shallow aquifer water flow is to the southwest. Over most of the site, however, groundwater flows to the northeast, where some small quantity of it may discharge into the San Antonio River (Turk, Kehle & Associates, 1976). The cross sections (see Figure 2.6-7) show one or more sand units (which are not specifically identified as such) above the Tordilla Sandstone that appear to be potential aquifers. The TDWR permits normally require that monitoring be done in overlying aquifers (one well for every 4 acres in the first overlying aquifer and one well for every 8 acres in each additional overlying aquifer). Further studies in support of the first production area should determine whether additional higher aquifers are present.

#### 2.7.2.2.3 Area Water Wells

The applicant located and sampled 37 water wells within 2.5 mi of the proposed license area (Figure 2.7-9). Little data exist concerning the age, construction, screened interval, total depth, etc. of these regional wells. Especially valuable would be information about the geologic interval from which groundwater is pumped. Presumably these wells are shallow and therefore most likely completed in the Catahoula or in the upper part of the Jackson Group.

Groundwater samples from the 37 wells were analyzed for normal major constituents, gross alpha, gross beta, and for radium-226 when



12 Wells within 1 km  
 4 wells within 1/4 mi

gross alpha exceeded 3 pCi/l (Table 2.7-1). Complete analyses and available well data (total depth, water level, etc.) are reported in the TDWR mining application (Texaco, 1981d).

Regional groundwater quality is quite variable. Total dissolved solids contents ranged from 412 to 4440 mg/l with an average of 1497 mg/l (in the slightly saline category). Sodium concentrations averaged 316 mg/l and ranged from 56 to 1010 mg/l. Twenty of the wells sampled had sodium levels exceeding the 250 mg/l limit recommended for drinking water. Chloride concentrations averaged 498 mg/l, ranging from 197 to 1510 mg/l. In all but three of the 30 samples analyzed for radium-226, concentrations were below 3 pCi/l. The remaining three had concentrations of 3.5, 12.8, and 102 pCi/l.

The major supply wells nearest the proposed project are about 4.5 mi to the north in Falls City and 7 mi to the southeast at Karnes City (Table 2.7-2). The Falls City well pumps from the deep Carrizo, while four wells in Karnes City pump from the Catahoula at moderate depths.

Groundwater quality in those strata affected or potentially affected by mining operations was surveyed by the applicant. Forty-seven wells, completed in either the production zone or upper aquifers within the proposed license area, were sampled. Well locations and contoured TDS concentration data for the production and shallow aquifers are shown in Figures 2.7-10 and 2.7-11. Table 2.7-3 identifies the wells shown in the figures. High, low, and average constituent concentration values for the upper aquifer (nonproduction zone) and for the production zone aquifer within both potential mine and production areas are summarized in Table 2.7-3. Complete analyses are found in the applicant's TDWR mining permit application technical report (Texaco, 1981d). Overall, the average values of most constituents in the wells within the proposed license area do not differ significantly from those reported for the regional wells. The water quality is, however, more consistent, exhibiting generally smaller ranges of concentration values. As expected, concentrations of radium-226 are notably higher than in regional wells.

## 2.8 Ecology

### 2.8.1 General Characteristics

The Hobson Tex-1 site is located in the South Texas Brush Country, a major natural region which is described in Appendix D. The applicant conducted on-site surveys of vascular plants and vertebrates (Texaco, 1981b; Eggleston Holmes and Associates, 1982). This information was supplemented by TDH personnel during site visits.

Botanical nomenclature follows Correll and Johnston (1970) for plant families except the Gramineae, which is based on Gould (1975).

APPLICATION  
and  
TECHNICAL REPORT

KINGSVILLE DOME IN SITU URANIUM  
LEACH PROJECT

Jointly Filed By  
URANIUM RESOURCES INC.  
WESTERN NUCLEAR INC.

Received  
1/4/85

WORK  
COPY

## 8 WATER SUPPLY WELLS

### 8.1 Permit Area Vicinity Wells

Within 1 km of the Kingsville Dome Project boundary there are 9 water supply wells from which URI was able to collect 9 samples. Because of age and lack of record keeping, well completion data for these wells is minimal. TDWR Report 173, which contains data for wells in Kleberg County disclosed data on only one well, WW-1. All other information within Table 4 resulted from discussions with the landowner and a review of TDWR records.

2 → Figure 3 discloses the locations of these wells with respect to the permit area boundary. Figure 17...

### 8.2 Major Regional Wells

Ten water supply wells are within five miles of the permit area. These include water supply for Kleberg Park, the Kingsville Naval Air Station, the Pan American School, G. R. Dietert Water Service and the City of Ricardo. Table 5 summarizes available information pertinent to these wells.



TABLE 4  
WATER SUPPLY WELLS

| Well # | TDWR # | Casing Type | Type Completion | Bottom Depth | Use      | Water Level      | Owner  | Production Method |
|--------|--------|-------------|-----------------|--------------|----------|------------------|--|-------------------|
| WW-1   | 502    | S           | Perforated      | 656          | Domestic | 106.0            | W. E. Cumberland<br>Rt. 1, Box 412<br>Kingsville, TX   | windmill          |
| WW-2   |        | S           | N/A             | 640          | Domestic | N/A              | A. M. Cumberland<br>Rt. 1, Box 238<br>Kingsville, TX   | submersible pump  |
| WW-3   |        | S           | N/A             | 550          | Domestic | N/A              | Warren Palareio<br>P. O. Box 217<br>Rivera, TX         | submersible pump  |
| WW-4   |        | S           | Perforated      | 700          | Domestic | N/A              | Stanley Dietz<br>Rt. 1, Box 432<br>Kingsville, TX      | submersible pump  |
| WW-5   |        | S           | N/A             | 656          | Domestic | N/A              | F. Radford<br>Rt. 1, Box 418<br>Kingsville, TX         | submersible pump  |
| WW-6   |        | S           | N/A             | N/A          | Domestic | N/A              | Mrs. L. L. Radford<br>Rt. 1, Box 418<br>Kingsville, TX | submersible pump  |
| WW-7   |        | S           | N/A             | 640          | Domestic | N/A              | Patricia Perez<br>Rt. 1, Box 432<br>Kingsville, TX     | windmill          |
| WW-8   |        | S           | N/A             | 986          | Domestic | N/A              | J. L. Robertson<br>Rt. 1, Box 424<br>Kingsville, TX    | submersible pump  |
| WW-9   |        | S           | Perforated      | 734          | Domestic | 100 <sup>±</sup> | B. W. Bippert<br>Rt. 1, Box 421<br>Kingsville, TX      | windmill          |

TABLE 5  
MAJOR REGIONAL WELLS

| <u>Well #</u>           | <u>Type Completion</u> | <u>Casing Depth</u> | <u>Total Depth</u> | <u>Water Level</u> | <u>Distance</u> |
|-------------------------|------------------------|---------------------|--------------------|--------------------|-----------------|
| 107 Kingsville Park     | N/A                    | 1074                | 1074               | N/A                | 5 miles         |
| 201 Naval Air Station   | screen - 89 ft.        | 791                 | 791                | 158' (1960)        | 5 miles         |
| 202 Naval Air Station   | screen - 205 ft.       | 795                 | 795                | 165 (1960)         | 5 miles         |
| 203 Naval Air Station   | screen - 225 ft.       | 725                 | 725                | 166 (1960)         | 4½ miles        |
| 209 Naval Air Station   | screen - 540-670 ft.   | 675                 | 675                | N/A                | 4½ miles        |
| 402 Pan American School | screen - 583-675 ft.   | 625                 | 625                | N/A                | 4½ miles        |
| 403 Pan American School | screen - 571-613 ft.   | 613                 | 613                | N/A                | 4½ miles        |
| 404 Pan American School | screen - 587-625 ft.   | 625                 | 625                | N/A                | 4½ miles        |
| 408 G. R. Dietert       | N/A                    | 620                 | 620                | 109 (1968)         | 3½ miles        |
| 410 Ricardo             | screen - 600-680 ft.   | 680                 | 680                | 140 (1965)         | 4 miles         |

# Report of Investigation at URI-Kingsville Dome Uranium Mine Site

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April, 1999



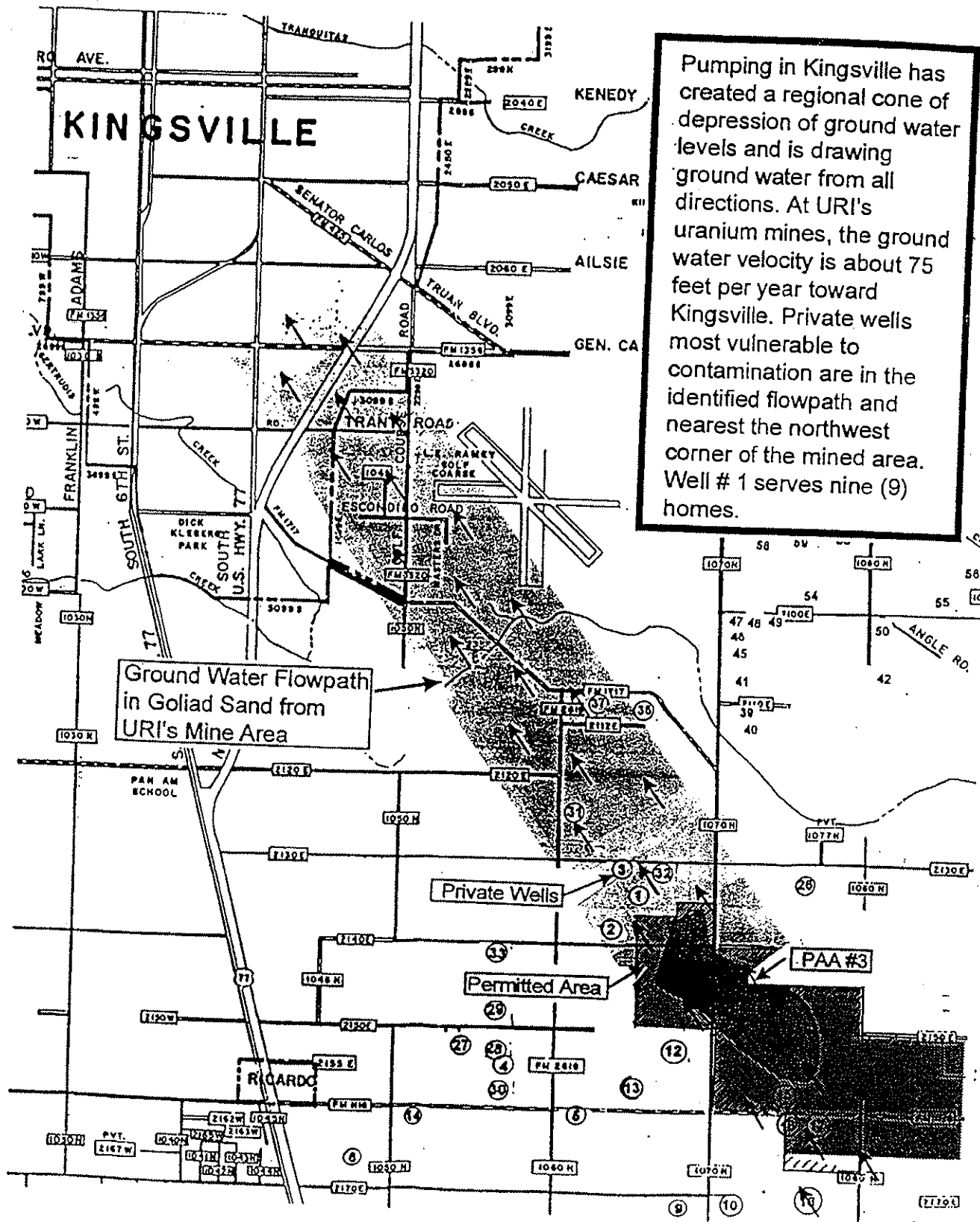
Protecting Texas  
by Reducing and  
Preventing Pollution

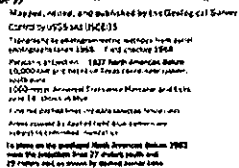
PAA#3 is the northwesternmost Production Area and will be the area nearest to existing wells that are in the flowpath between PAA#3 and the well fields in Kingsville. The most vulnerable well is No. 1, which is known as 'Garcia Hill Main Well'; that serves nine (9) houses. It is about one-fourth of a mile from the active mined area. Other nearby wells are No.2 (Angelica and Tomas Garza), No. 3 (Marvin Hamilton), and No. 32 (Garcia Hill Livestock). Three other wells (Nos. 31, 37, and 38) are in the direct flowpath from URI mines to Kingsville.

Larry F. Land, P.E.

HDR Engineering, Inc.

# PRIVATE WELLS IN GROUND WATER FLOWPATH





SCALE 1:20,000

170 0 100 200 300 400 500 600 700 800 900 1000

170 0 100 200 300 400 500 600 700 800 900 1000

CONTINUED INTERVAL TO 1647

ALLEGAN GEOLGIC MAPPING MAP OF 1947

THIS MAP COMPLETES THE MAPPING OF ALLEGANY TERRACE  
FOR MAPS BY U.S. GEOLOGICAL SURVEY  
DENVER, COLORADO. MAPS OF WESTERN ALLEGANY SHOW  
A PORTION OF GEOLOGIC MAPPING MAP OF 1947. IT IS AVAILABLE ON REQUEST.



1798-432

**ROAD CLASSIFICATION**

highway, all weather, light duty road, all weather  
unimproved unpaved & stone unimproved  
unimproved roads less than city  
streets

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ROSTA, TEX.  
37904-24-PT-274  
1989

0005 13001 13 26 16443 1200

Appendix E-2

Rosita Project Water Well Inventory

| Well ID | Owner            | Type Pump     | Use                  | Approx. Depth | Casing | Dr. Date | Samp Date |
|---------|------------------|---------------|----------------------|---------------|--------|----------|-----------|
| RS-3    | Julio Flores     | Windmill      | Livestock            |               | Steel  |          | 2/17/1986 |
| RS-4    | Jose Cardenes    | Windmill      | Livestock            |               | Steel  |          | 2/17/1986 |
| RS-5    | Roy Rogers       | Windmill      | Livestock/Domestic   | 265           | Steel  | 1978     | 2/17/1986 |
| RS-8    | C. Sendejo       | Windmill      | Livestock            |               | PVC    |          | 2/20/1986 |
| RS-9    |                  | Windmill      | ABANDONED            |               |        |          |           |
| RS-10   |                  | Windmill      | ABANDONED            |               |        |          |           |
| RS-11   | E Rangel         | Handpump      | Not Used             |               | Steel  |          | 2/24/1986 |
| RS-12   | A. Rangel        | Windmill      | Livestock/Domestic   | 200           | Steel  |          | 2/24/1986 |
| RS-13   |                  | Windmill      | ABANDONED            |               | Steel  |          |           |
| RS-14   | T. Crews         | Submersible   | Livestock            |               | Steel  |          | 2/21/1986 |
| RS-16   | M. E. Ellis      | Not Used      | ABANDONED            |               |        |          |           |
| RS-18   | R. Rangel        | Not Used      | ABANDONED            |               |        |          |           |
| RS-19   | T. Crews         | Submersible   | Livestock            | 180           | Steel  | 1975     | 2/21/1986 |
| RS-20   | A. Garcia        | Submersible   | Livestock            |               | Steel  |          | 2/25/1986 |
| RS-21   | P. Rangel        | Windmill      | Livestock            |               | Steel  | 1977     | 2/24/1986 |
| RS-24   |                  | Not Used      | ABANDONED            |               |        |          |           |
| RS-25   |                  | Not Used      | ABANDONED            |               |        |          |           |
| RS-26   | Octavo Rangel    | Submersible   | Livestock            |               |        |          |           |
| RS-32   | Kenneth Cook     | Submersible   | Livestock            |               |        |          |           |
| RS-33   | Kenneth Cook     | Submersible   | Livestock            |               |        |          | 4/21/2006 |
| RS-34   | Abe Trevino, Jr. | Submersible   | Domestic             |               |        |          |           |
| RS-35   | Abe Trevino, Jr. |               |                      |               |        |          |           |
| RS-36   | V. Rangel        | Windmill      | Livestock            |               |        |          |           |
| R62     | L. Ramos         | Windmill      | ABANDONED            |               |        |          |           |
| R63     | David Carillo    | Submersible   | Domestic             | 200           | PVC    |          | 1/19/2006 |
| R64     | David Carillo    | Submersible   | Domestic             | 200           | Steel  |          | 1/19/2006 |
| R65     | David Carillo    | Pump jack     | Livestock            | 200           |        |          | 1/19/2006 |
| R66     | Tony Canales     | Windmill      | Livestock            |               | Steel  |          | 1/19/2006 |
| R67     | Rene Valeria     | Pump jack     | ABANDONED            |               | Steel  |          |           |
| R68     | M Ramos          | Submersible   | Livestock/Domestic ✓ |               | PVC    |          | 1/19/2006 |
| R69     | Pena             | Windmill      | ABANDONED            |               | Steel  |          |           |
| R70     | Carillo??        |               | Livestock/Domestic ✓ |               |        |          | 4/21/2006 |
| R73     | Gilbert Valerio  | Electric Pump | Livestock/Domestic ✓ |               |        |          | 1/19/2006 |
| R74     | Gilbert Valerio  | Pump jack     | ABANDONED            |               |        |          |           |
| R78     | Sara Garcia      | Submersible   | Livestock/Domestic ✓ |               | PVC    |          | 1/19/2006 |
| R79     | Sara Garcia      | Windmill      | ABANDONED            |               |        |          |           |
| R81     | Ramos            | Submersible   | Livestock            |               |        |          | 4/21/2006 |
| R82     | Lorenzo Garza    | Submersible   | Livestock            |               |        |          |           |
| R83     |                  |               | ABANDONED            |               |        |          |           |
| R84     |                  | Submersible   | ABANDONED            |               |        |          |           |
| M1      | Rene Valeria     | Monitor Well  | Capped               |               |        |          |           |
| M2      | Sara Garcia      | Monitor Well  | Capped               |               |        |          |           |

**Attachment 3**  
**Western Nebraska**



VERY IMPORTANT



and they should be rejected as conflicting with the SDWA's goal of protecting sources of drinking water. Br. Pet. at 17-19.<sup>13</sup>

Petitioner's arguments ignore the fact that the basic premise of the exemption regulations is that aquifers (or portions thereof) cannot be exempted unless they are not existing or future sources of drinking water. As was pointed out above, a fundamental prerequisite to the approval of an aquifer exemption is that:

- (a) It does not currently serve as a source of drinking water; and
- (b) It cannot now and will not in the future serve as a source of drinking water . . . .

40 C.F.R. § 146.4. These regulations are thus specifically tailored to bar exemptions that may affect sources of drinking water; therefore, they are perfectly consistent with Congress' intent in enacting the SDWA. As the statute itself and its legislative history make clear, Congress' intent was to protect drinking water, not woodenly to bar all underground injection in all aquifers regardless of whether such injection might have the potential to affect drinking water sources.<sup>14</sup>

<sup>13</sup> Petitioner and amicus curiae made the same arguments to the Court in WNRC I. Br. Pet. WNRC I at 22-28; Reply Br. WNRC I at 14-17; Amicus Br. WNRC I. The one addition to this argument which petitioner has made is an extended discussion of the First Circuit's decision in Natural Resources Defense Council v. EPA, 824 F.2d 1258 (1st Cir. 1987) (hereinafter "NRDC"). This decision is irrelevant to the issue of EPA's programmatic authority to approve aquifer exemptions. NRDC involved regulations promulgated under the Nuclear Waste Policy Act which the Agency conceded could allow activities to occur which eventually could cause contamination of drinking water supplies. 824 F.2d at 1275-76. As discussed below, EPA's aquifer exemption regulations are, by contrast, specifically tailored to avoid affecting sources of drinking water.

<sup>14</sup> See 42 U.S.C. § 300h(b)(1) (EPA shall promulgate regulations "to prevent underground injection which endangers (continued...)

MOST  
IMPORTANT  
POINT.

- B. The Criterion of 40 C.F.R. § 146.4(a) Was Satisfied, As No One Currently Uses the Exempted Portion of The Chadron Aquifer as a Source of Drinking Water

EPA found that the criterion set out in 40 C.F.R. § 146.4(a) was satisfied insofar as "[n]o one was identified as currently using water for human consumption from the Chadron Aquifer in the specific lateral boundary in the entire 3,000 acre area the State has requested for exemption." 55 Fed. Reg. at 21,192. This conclusion was based on the following information of record: 1) a FEN water user survey which was updated during 1987 and which is included in FEN's commercial permit application to NDEC, 2) a 1982 NDEC report and inventory of wells, and 3) all public comments received during the public comment period and hearing held by EPA on Nebraska's renewed exemption request. 55 Fed. Reg. at 21,192.<sup>44</sup>

Petitioner does not dispute EPA's conclusion that no one within the exemption boundary is currently using water for human consumption from the Chadron Aquifer. Rather, it asserts that this fact is somehow suspect due to improper "gerrymandering" of the exemption boundary. Br. Pet. at 30-31. Petitioner asserts that its gerrymandering claim is supported by: 1) the fact that a few persons

<sup>44</sup> See, e.g., Baseline Hydrogeochemical Investigation in a Part of Northwest Nebraska, Prepared for NDEC by Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska, Principal Researcher Dr. Roy Spalding (hereinafter "Spalding Investigation") (R.2, File D4, 6/1/82) (J.A. at 403); Ferret Permit Application to NDEC (dated November, 1987), Ch. 13 (R.32, File G, 12/9/87) (J.A. at 483) (attachment to Letter dated 12/9/87 from Jay D. Ringenberg, NDEC, to Harold Owens, EPA); Order of the Director, NDEC, In the Matter of the Petition by Wyoming Fuel Company for an Aquifer Exemption at 6 (R.21, File F, 3/23/84) (J.A. at 733) (hereinafter "NDEC Order") (Att. 2 to Ltr. from D. Grams, NDEC, to Morris Kay, EPA (3/18/88)); Letter dated July 28, 1988 (with attachments), from S. Collins, FEN, to Angela Ludwig, EPA (R.24, File F, 7/28/88) (J.A. at 739). No commenter at the hearing on 8/29/88 or in comment letters following the hearing indicated that any drinking wells were within the proposed exemption area.

outside of the exemption boundaries use the Chadron aquifer for drinking water, and 2) a 1983 magazine article not in the administrative record that describes the uranium mineral deposit as extended to the town of Crawford. Id.

\* As explained above, petitioner's criticisms of the exemption area delineation are meritless. However, even if considered, these arguments do not detract from the propriety of EPA's decision regarding satisfaction of the criterion set out in section 146.4(a). As to the first point, the fact that persons may use drinking water drawn from the Chadron aquifer outside of the proposed exemption boundary is obviously irrelevant to section 146.4(a), which looks only to the use of the exempted portion of the aquifer. In any event, the record indicates that such users are few in number, and will not be affected by FEN's mining activities.<sup>45</sup> On the second point, even if petitioner's improper attempt to rely on evidence outside the record were to be overlooked, the fact that the ore deposit may be bigger than the requested exemption is of no consequence. Nowhere do the regulations require an exemption area to cover an entire ore deposit; indeed, in WNRC I this Court upheld an exemption that included far less of the mineral deposit than is included in the current exemption.<sup>46</sup>

C. The Criterion of 40 C.F.R. § 146.4(b)(1) Was Satisfied,

<sup>45</sup> Spalding Investigation, supra (R.2, File D4) (J.A. at 403); FEN Permit Application to NDEC, supra, at Figure 4.3-1 and Subsection 4.4(A) (Water Quality Data) ("FEN Permit Application") (R.32, File G, 12/9/87) (J.A. at 483).

<sup>46</sup> It is particularly striking that in this line of attack, WNRC alleges that the boundaries are drawn too small (in that they exclude certain wells), while it elsewhere claims that the boundaries are drawn too large (by including "non-mineralized" areas).

## **Attachment 4**

### **UEC's Contested Case**

### **Administrative Law Judge's**

### **Proposal for Decision**

**(Key Excerpts Regarding Test for Current Use)**

contaminated due to the uranium mineralization such that it would be economically or technologically impractical to tender the water fit for human consumption.<sup>132</sup> Thus, according to the ED, the proposed exempted aquifer meets the requirements of 30 TAC § 331.13(1) and (2)(A) and (C) for designation as an exempt aquifer.

**B. ALJ's Analysis**

The evidence clearly shows that there are no water wells that are used for human consumption within the proposed aquifer exemption area. Protestants do not dispute this fact. But their expert witnesses, Dr. Clark and Mr. Blandford argued, for slightly different reasons that the exemption area currently serves as a source of drinking water for human consumption because wells outside the exemption area and down-gradient will at some future time receive water from within the exemption area. UEC and the ED responded to this argument that Protestants ignore the word "currently" because a well outside the exemption area can obtain water from the proposed exempted aquifer only at some time in the future. Goliad County criticized this interpretation as self-serving and nonsensical. The District characterized this interpretation as gerrymandering.

Considering the positions of Dr. Clark and Mr. Blandford in light of the plain language of 30 TAC § 331.13(c)(1), it appears to the ALJ that it is Protestants' experts that are being self-serving and gerrymandering with their theories of hydraulic connection and meaning of the word "source." Moreover, it is undisputed that UEC has demonstrated satisfaction of the second prong of the aquifer exemption demonstration that the area of the exempted aquifer is uranium-bearing with production capability. The ALJ finds that the preponderance of the evidence supports the conclusion the UEC has demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 TAC § 331.13. This finding is further supported by the holding in *Western Nebraska Resources Council v. United States Environmental Protection Agency*,<sup>133</sup> cited by the ED.

<sup>132</sup> ED Ex. ED-1, Murry Direct at 8.

<sup>133</sup> 943 F.2d 867, 870 (8<sup>th</sup> Cir. 1991).